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Cost of Corrosion for Commercial Aviation

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It was explained that due to the difficulty of obtaining accurate corrosion costs, this presentation was more in the nature of a statement rather than a written paper on airline corrosion costs. The intention was to highlight the existence of the International Air Transport Association Document "Guidance Material on Design and Maintenance Against Corrosion of Aircraft Structures" (Doc Gen/2637). This document had been prepared by a working group of several airline members on desirable practices and included an estimate of corrosion costs. These costs were in the process of being updated to 1983 values (based purely on labour escalation costs) since the original figures were derived in 1979.

The relevant section from the document dealing with costs is reproduced as follows:-

"Several IATA Member Airlines have made a preliminary analysis of their corrosion costs based on the annual costs of scheduled maintenance, modification and replacement.

The results of these analysis show the financial cost of the corrosion problem which can be expressed in several ways.

- i) Direct cost per flying hour depending on operators and aircraft type (not including maintenance overhead.

| <u>1979</u> | <u>1983</u> |
|-------------|-------------|
| \$8 - \$12 | \$8 - \$20 |

- ii) Percentage of direct airframe maintenance cost between 6% and 8%.
- iii) Total annual direct cost for IATA Member Airlines.

\$100 M based on 1976 operations and
\$200 M based on 1982 operations.

It should be noted that the values represent costs for a range of operators and aircraft types. The lowest value is very conservative and is largely based on one operators actual modification project costs only. The higher value is probably closer to the true cost since it is based upon a breakdown of actual modification, routine maintenance and inspection costs.

Closer examination of these figures reveal that the major component in the cost values associated with corrosion prevention and control is due to labour costs. An additional cost not reflected in the above figures is the unscheduled downtime both at main base and route stations."

It was explained that the original IATA document was in the process of being updated to include information of benefit to the airlines in maintaining the aircraft during its operational life. This updated issue is due to be published in the near future.